



The Newsletter of the Milwaukee Astronomical Society

September 1997

Kudos

Heartfelt thanks go out to **Tom Renner**, for his outstanding job as Program Chairman over 15 plus years. Tom's invaluable contacts in academia and industry have brought us a host of premier astronomy professionals and highly qualified speakers in related areas. These speakers have given MAS members insights in new developments in astronomy in such diverse areas as gravitational lensing of galaxies, the physics of halo and rainbow formation, observing experiences in Anartica, to Astronaut Mark Lee's review of NASA programs and his forthcoming participation in upgrading the Hubble telescope. In past years, Tom caught members attention by bringing in alternative views of the heavens as presented by a native American Indian describing Indian lore associated with the stars. Tom also brought class to the annual MAS banquets. His dinner/awards banquets were always first class with a setting that dignified the awards presentation. The speakers and topics selected for the banquets always seemed to be enjoyable to both MAS members and non - astronomy family members as well. Very nice touch!

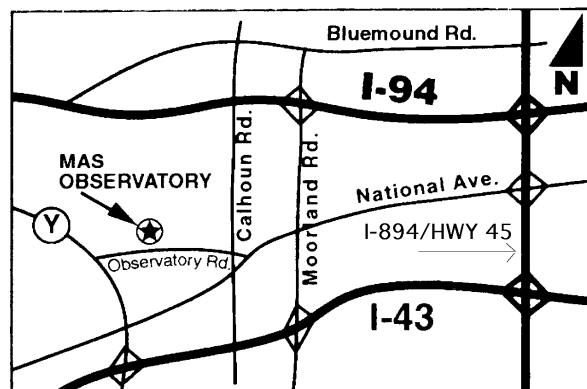
Tom has been a member of MAS since 1969. Back in the days of Ed Halbach, he was active in the Variable Star Observing program, participated in numerous grazes and occultations and served stints as vice president and president of the society as well. He is still a very busy consulting civil engineer whose program chairman talents will be missed.

On behalf of the Society members, Tom, thank you very much!



Membership Renewal Time

The month of September is traditional renewal time for membership in the Milwaukee Astronomical Society. Julie Frey, our hard working membership chairperson, has mailed out renewal applications under separate envelope with forms, instructions, etc. in August. Please respond in the time she requests. Late renewals have caused a lot of extra work and phone calls handling discount subscriptions etc. Help us out...Renew



Membership Meeting Sept. 19 at 8:00 PM

The fall season starts of with our regularly scheduled meeting at the club's observatory site (location is shown on the above map). Members and non-members are welcome. In lieu of a guest speaker, the subject of discussion is the merits of keeping our club membership in the Astronomical League. The cost of membership in the league has increased to over \$3.00 (\$2.70 of which is for the Reflector Magazine) per member. Some feel it is starting to impact our budget for other activities. The crux of the matter is whether the League is doing a cost effective job of fostering and representing amateur astronomy at a regional level that warrants our increased support. Member discussion and inputs are needed. Mr Barry Beaman, President of the League is coming up from Rockford IL to discuss the matter with us as well.

The MAS board meeting precedes the general membership meeting at 7:00 PM. Interested members are welcome to sit in.

Other MAS September Events

***1st Wednesday meeting, Sept.3rd, 7:30pm**

Informal meeting with Observatory Director, Gerry Samolyk, to discuss forthcoming club observing events and/or work on observatory projects. All welcome.

*** MAS Open Houses, Sept. 12 & 26 @ 8:00PM**

These are combined Star party/Lectures for the general public and are fun to do. Member help is needed, from running the scopes, to help run the parking lot. A great way to get your feet wet in club activities.

Observatory Rework Program

Considerable rework of MAS telescope facilities has been taking place under the direction of Gerry Samolyk, Observatory Director, in the last year. Last fall, for example, the 12 inch mirror from "A" observatory and over half of the Portable scope mirrors (there are 9 plus) were removed and delivered to PH Clausing in Illinois for aluminizing. This spring, the remainder of the portascopes mirrors and the 12 inch mirror from "B" scope have been put thru the same process. Most of the mirror removals and installations were accomplished with volunteer help from members that showed up at the "first Wednesday" of the month meetings. It was educational for a lot of those present in learning to demount the mirrors from their cells and reinstall them. Special thanks to Scott Laskowski and Virgil Tangney for helping with the mirror removal and safely hauling them to and from Clausing.

Currently, Z scope (our 25 inch Cassegrain) is undergoing significant drive system redesign. A task team of Gerry Samolyk, Scott Jamieson, Tim Hoff, and Bryan Garness are taking a three phase approach to "digitizing" the drive system. These developments include:

- * **Stage 1.** Develop and install the digital interface that allows both computer and hand held "paddle" slewing of both axes at multiple speeds.

- * **Stage 2.** Add high resolution digital encoders to both axes and interface to a resident computer to provide angle readouts (on the screen).

- * **Stage 3.** Interface the system developed in stage 2 with "Project Pluto" software. Project Pluto is a star catalogue/chart commercially available and contains the complete Hubble data base. The effort here is primarily the writing of custom software to interface the telescope to the Pluto package in the resident computer. Features of the software will include selecting a star or celestial object from the catalog list (or point and click at the star chart) and command the Z scope to slew and lock on to that object. A 486 based 66 mhz computer has been donated for Z scope use.

It is hoped that stage 1 will be accomplished in the next two months or so with the remainder to be done within the next 6 months. Sometime after reliable slew and tracking control is achieved, the mirror(s) will be recoated and some minor mods made to the cell support to minimize any induced stresses in the primary mirror.

More Thanks...

To **Brent Wilson**, who stepped into the fray by taking over the Focal Point Editorship from a very busy Dan Koehler. Brent served as editor for the last 10 months and kept the lines of communication open to members in spite of a busy work schedule and a growing family. On occasion, Brent brought the baby (and a bottle of milk) to the Board meetings while keeping himself posted on the latest MAS developments. That's dedication! Like a lot of modern (and mobile) families, Brent got a job offer he couldn't refuse and has relocated to Florida. Thank you, Brent, for your dedication and good fortune in your new job and home. Lastly, thanks to **Julie Frey** for the 1997 summer issue of Focal Point and keeping communications continuity.

Yerkes Observatory Events

The University of Chicago Science Department Picnic on August 10th was a success despite a couple of brief showers. Over one dozen MAS members enjoyed the great food and the self guided tours throughout the building and grounds. The **CARA Space Explorers** had a cloudy night but were instructed by many amateur astronomers on a variety of different instruments including Scott Jamieson's CCD camera. The students and parents had two clear nights (Wed. & Fri.) to observe with MAS Porta-scopes. Some of the projects included: learning star names, determining the speed of light, Kepler's Laws, and the result of gravitation - the solar radiation flux.

The Stellar Centennial Celebrations on Sat. & Sun. September 6th & 7th, beginning at 6:00PM. All MAS members are encouraged to bring telescopes and expert knowledge of the sky. This will be a public "Star Party" including evening use of the 40 inch refractor, weather permitting. The MAS has had close relations with Yerkes in the past. All that participate in these events have fun and very rewarding experiences to remember.

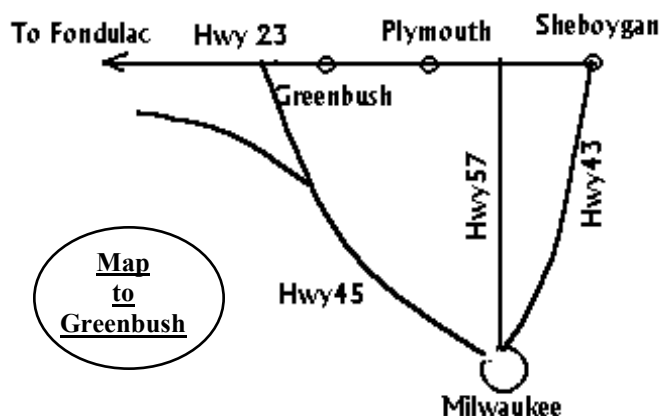
-Scott Laskowski

MAS Autumn Campout Oct. 3rd & 4th

The MAS Autumn Starparty campout will be held on Friday, Oct. 3rd and Saturday Oct. 4th at the Greenbush campsite in the northern Kettle Moraine State Forest. MAS is picking up the fees for group campsites # 3 & 4 so all you'll need is a State of Wisconsin Park sticker on your car, and an enthusiastic desire to share the night sky with fellow amateur astronomers. The star party is also a opportunity for a newcomer to learn the ropes of finding the way around the night sky.

Not into roughing it any more? no problemconsider coming out for either evening and take a late 45 minute drive home. Or cushier yet.... there are fine motels in nearby Kewaskum or West Bend.

We will be bringing the Doc Weissen 18" Dobsonian telescope and some of the club's portascopes to share at the site....so it still boils down to just bringing yourself! It is hoped that one of the big discoveries you'll make is that there are really nice people willing to share this wonderful hobby of ours and, if you so desire, get some "hands on" observing in. Any questions, **Call Paul Borchardt at 781-0169 or Dan Yanko at 453-3382** -Dan Yanko



Scope Builder's Corner

From time to time, we'd like to feature unique home built telescopes, observatories and accessories that our own members have created. One very creative person is MAS Vice President **Scott Jamieson**. Scott designed and fabricated a novel observatory dome, 12 feet in diameter, stands 9 feet high, and rotates on four 16" inflatable tire wheels in the circular ring base of the dome. The wheels, in turn, roll on a circular track of flat patio stone imbedded in the ground. The structure is very light weight and hence, is easily rotated with one hand.

The light weight, but very rigid walls and roof, were arrived at by using two intersecting cylinders. 5mm plywood was coved to form the cylindrical walls with the only stiffening structure in the base ring. When the roof cylinder, also of 5mm plywood, is precisely seamed with the wall top edges, the dome becomes very strong as the coved plywood produces a stressed skin effect. Very little internal frame is needed. The roof/wall seams are joined by a selected construction adhesive (after much testing) with no auxiliary ribbing or frame.



Jamieson's observatory awaiting a clear night sky



Scott standing in his dome. Note entry door behind him

Builders corner continued

The trick is to layout the cutting of the plywood (in a flat plane) such that very accurate wall/roof seam lines result when the dome is assembled. The layout must include that cylinder axes do not intersect but are offset so that the dome opening is low on one side (for low horizon viewing) and high (for a door) other side. The wall flat spots (see photo) correspond to dome opening and entry door width.

The dome opening is a 36" wide rectangular slot ribbed with framing (cut to the roof diameter). The dome slot cover frame overlaps the the dome frame for weather resistance. The cover has translucent, corrugated fiberglass that lights up the interior in the daytime. For night time use, the cover is unhooked on the bottom edge and slides off easily.

Scott says that the dome reduces stray light effect from the neighborhood, helps retain the dark adapted eyes, and buffers the cold breezes.

Also shown in the photos is Scott's 10" F/6 telescope which uses Dobsonian type mounting structure adapted to an equatorial mount. This telescope has so many unique features, Sky and Telescope gave it full article write up (See May 1994 issue of S&T).

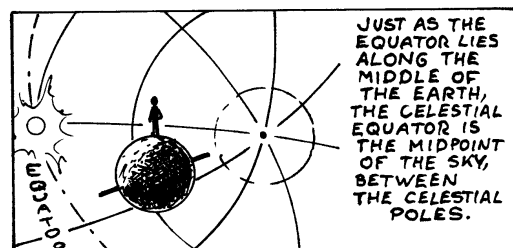
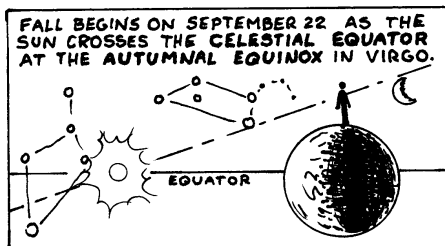
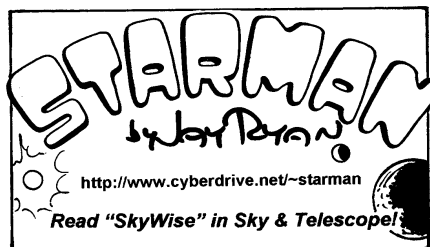
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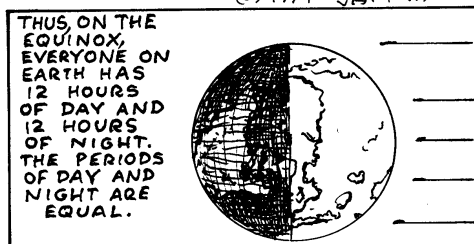
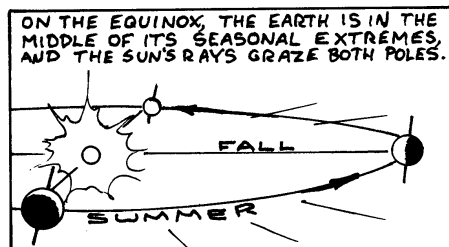
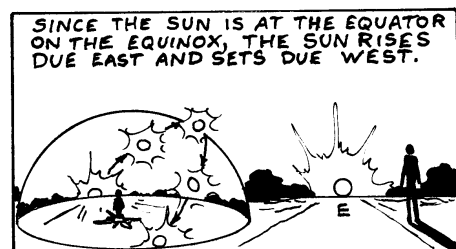
Observatory entry



Scott's 10" Equatorial featured in the May 1994 issue of Sky and Telescope magazine



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(c) 1997 Jay Ryan

Editor's Note: Jay Ryan is discontinuing his Starman effective January 1998 to pursue a book he is planning and also, to better support his Starwise cartoons now appearing in Sky and Telescope. However we plan to run the remainder of his Starman thru December 1997

Library News

The following items have recently been added to the MAS library:

1. **Sky Globe**- SAO Star Data set, for DOS, WIN 3.11, & WIN 95. Tim Hoff was a hit with this program on his lap-top computer with the space Explorers during the Yerkes picnic on Aug. 10th. Five sets (two HD diskettes each) are available from the MAS library. The signout procedure will be the same as for video tapes; write the date, your name, and phone number on the appropriate orange sign out card. - Donated by Tim Hoff.

2. **Stargazers: 100 Years of the Lowell Observatory**, Discovery Productions-1994 VHS video tape, 50 minutes, narrated by Patrick Stewart. Percival Lowell thought he saw the artifacts of intelligent life on Mars; but history set the stage for serious work that resulted in the discovery of Pluto by Clyde Tombaugh at the Lowell site, Stargazers continues with "popular astronomy" considering the possibility of asteroid collisions and preventing Earth impacts. The video is introductory level about basic astronomy. that is factual and entertaining. -Donated by Lee Keith.

Scott Laskowski
MAS Librarian

For Sale

1.25" Eyepiece, 32mm, Meade 4000 Super Ploessel, 1 year old, with case, \$80. Contact Brent Wilson (904)215-0188 or write: 1639 Brighton Bluff Court Orange Park, FL.32073

MAS Officers/ Staff

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Focal Point

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Keyholders

Keyholders are members who will open the observatory facilities for member use on the designated weekend and by prior arrangement. Call well before the desired weekend.

September

6	Tim Hoff	(414) 662-2212
13	Scott Jamieson	896-0119
20	Lee Kieth	425-2331
27	Dan Koehler	662-2987

October

4	Jim Kube	453-8858
11	Scott Laskowski	421-3517
18	Terry Ross	784-2083
25	Tom Schmidtunz	352-1674